

Comparative Study of Quantitative Efficacy Test Methods for Liquid Sporicides on Hard Surfaces—Do We Need a New Test?

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Key Words: bioterrorism, anthrax, sporicides, methodology, collaboration

The EPA Office of Pesticide Programs is responsible for regulating antimicrobial products used to control pathogenic bacteria (including spores), viruses, and other microorganisms on porous and nonporous surfaces. Following an intentional release of anthrax spores into federal office buildings in 2001, the Agency was inundated with requests to use various decontamination chemicals against spores of *Bacillus anthracis*. EPA needed to decide quickly which sporicidal chemicals should be used to clean up the contaminated area.

Chemical producers used numerous test methodologies and surrogates in generating the efficacy data to back up these requests, but the AOAC Sporicidal Activity Test is the laboratory method accepted by EPA for efficacy testing of liquid and gaseous sporicides. Because the AOAC method is qualitative and lacks standardization in several key steps, a study was later designed to evaluate the AOAC method and two quantitative methods selected by a multi-Agency workgroup. In the initial investigation, liquid sporicides on hard surfaces are tested against spores of *B. subtilis* by three federal laboratories. The reduction in the number of surviving spores will be calculated using formulas appropriate for each laboratory test. The data generated from this research will be used to develop additional studies and to validate a selected test method and surrogate for *B. anthracis*. This research may lead to a replacement of the AOAC method. An update on the status of this project will be provided.

Results of the tests, using the three different methods are presented graphically and impacts on public health are also touched on.